

Navigation Protection Program (NPP)
820-800 Burrard Street
Vancouver BC
V6Z 2J8

Our file: 2022-508120
Registry number: 6775

APPROVAL

OWNER: **BC Hydro and Power Authority**
333 Dunsmuir Street
Vancouver, BC V6B 5R3
Canada

SITE LOCATION: **Located in Peace River, approximately at 56° 1' 44.58" N, 121° 54' 21.96" W, located on unsurveyed foreshore or land covered by water being part of the bed of Peace River, Section 19, Township 81, Range 25, West of the Sixth Meridian Peace River District, Plan EPP93280, PID 031-078-788, Hudson's Hope, in the Province of British Columbia.**

WORK(S):

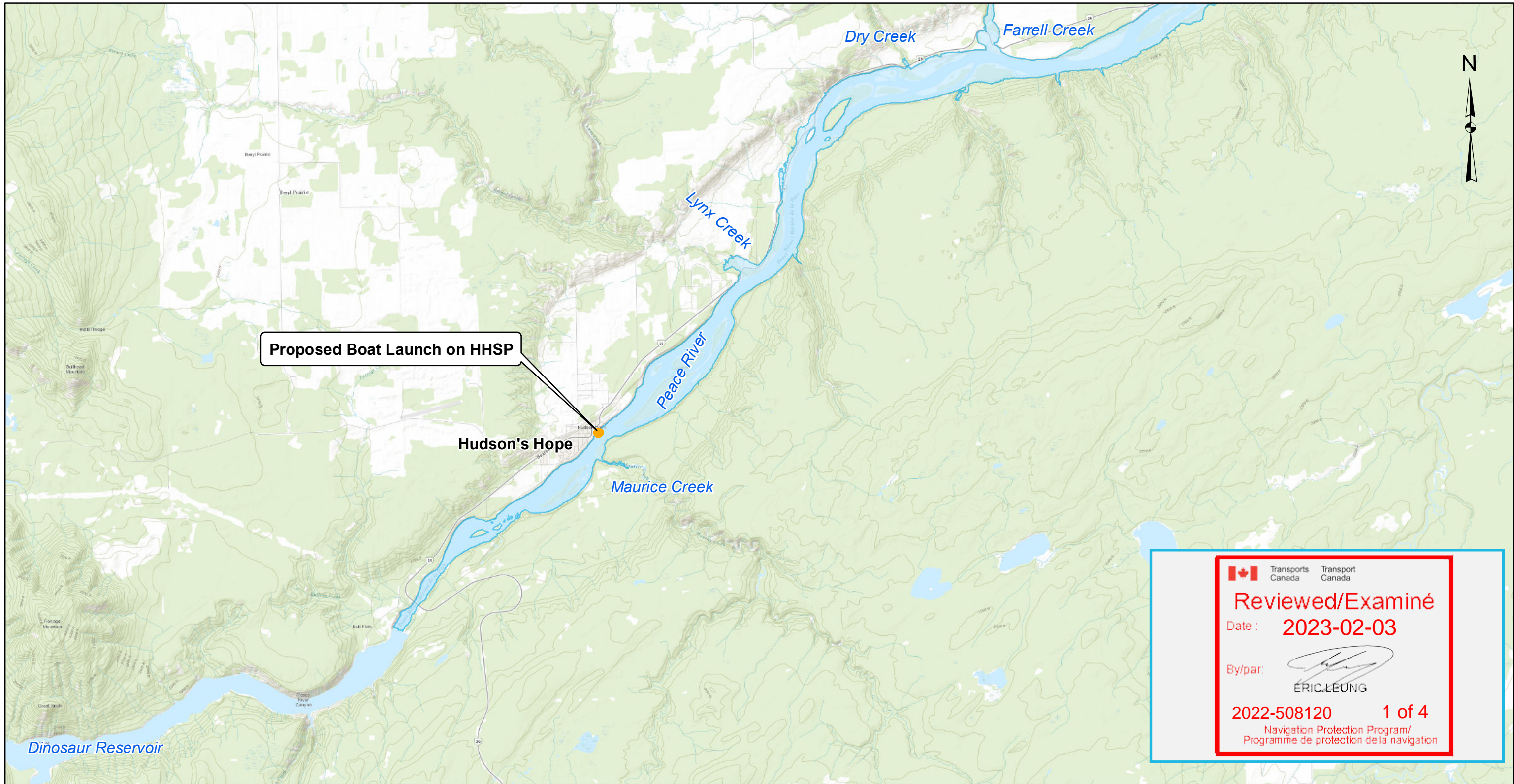
- **Slipway and boat-launching ramp – recreational**

As per the application (detailed above) to the Minister of Transport, submitted pursuant to the *Canadian Navigable Waters Act*, for an approval of the work per the attached four (4) plans, the Minister hereby approves the work pursuant to subsection 7(6) for the construction of the above-mentioned work, in accordance with the following terms and conditions:

1. The CNWA Approval and its Terms and Conditions shall be posted at an easily accessible place at the worksite.
2. In the event that the operation of the above works is terminated, it will be the proponent's responsibility to remove the works and associated equipment in its entirety including any anchors and pilings.
3. Construction equipment used in conjunction with this project shall be stored in such a manner that it does not obstruct navigation.
4. Equipment used in construction must not prevent vessels from navigating past the work site.
5. Construction machinery left in the water during darkness or limited visibility shall be marked with a flashing yellow light, visible to upstream and downstream traffic.
6. Any construction equipment anchored or left in or on the waterway shall be marked with a yellow flashing light placed on the outermost extremity if left overnight.
7. The light atop the daymark must remain on at all times when in use and shall not flash.
8. The owner shall conduct an Airborne LIDAR survey of the reservoir area post construction and clearing, but prior to the filling of the reservoir. This survey shall be the basis for mapping of the reservoir for boating.

SIGNED ON March 10, 2023
at the NPP regional office of Pacific

Eric Leung
NPP Officer
Programs Group
Transport Canada
Pacific Region
For the Minister of Transport



Proposed Boat Launch on HHSP

Hudson's Hope



Transports Canada / Transport Canada

Reviewed/Examiné

Date: **2023-02-03**

By/par: 
ERIC LEUNG


2022-508120 1 of 4

Navigation Protection Program /
Programme de protection de la navigation



- Map Notes:
1. Datum: NAD83
 2. Projection: UTM Zone 10N
 3. Base Data: Province of B.C.
 4. Basemapping provided by ESRI
 5. Proposed reservoir area (461.8m maximum normal elevation) from Digital Elevation Models (DEM) generated from LIDAR data acquired July/August, 2006.

Legend

 Proposed Boat Launch on Future Reservoir located on HHSP

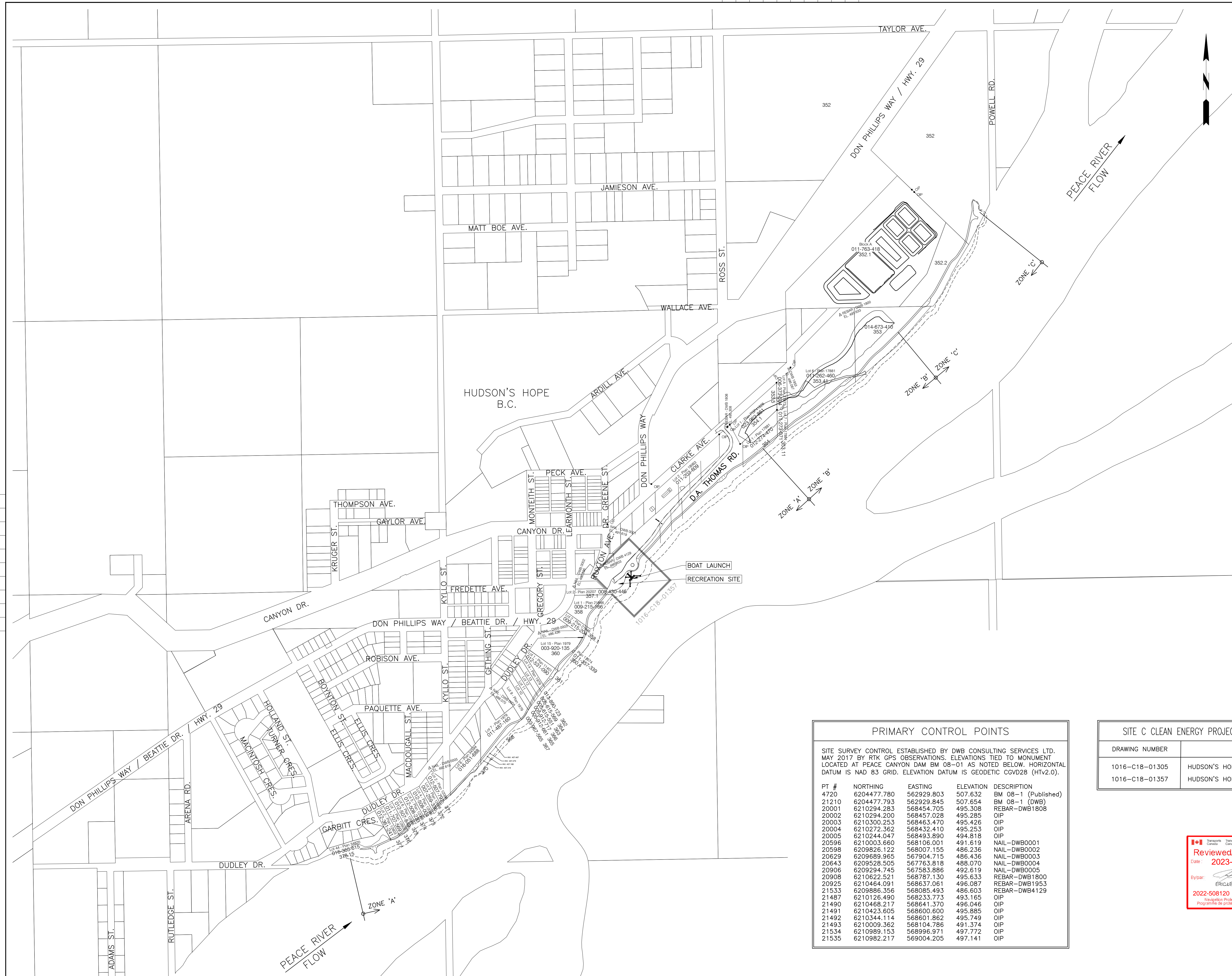
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Proposed Boat Launch on the Future Site C Reservoir, located on the Hudson's Hope Shoreline Protection

Date	Oct. 6, 2022	DWG NO	1016-N11-01503-1	R 0
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Path: X:\cgs\Projects\Permitting\Federal_Permitting\NavPro\Acct\HHSP_BoatLaunch_TC_1016_N11_01503-1.mxd



LOCATION MAP
N.T.S.

- NOTES:
- LEGAL LINES WITH LOT INFORMATION AS PROVIDED BY B.C. HYDRO.
 - ORDINATES ARE NAD 83, UTM ZONE 10.

PRIMARY CONTROL POINTS

SITE SURVEY CONTROL ESTABLISHED BY DWB CONSULTING SERVICES LTD. MAY 2017 BY RTK GPS OBSERVATIONS. ELEVATIONS TIED TO MONUMENT LOCATED AT PEACE CANYON DAM BM 08-01 AS NOTED BELOW. HORIZONTAL DATUM IS NAD 83 GRID. ELEVATION DATUM IS GEODETIC CGVD28 (HTV2.0).

PT #	NORTHING	EASTING	ELEVATION	DESCRIPTION
4720	6204477.780	562929.803	507.632	BM 08-1 (Published)
21210	6204477.793	562929.845	507.654	BM 08-1 (DWB)
20001	6210294.283	568454.705	495.308	REBAR-DWB1808
20002	6210294.200	568457.028	495.285	OIP
20003	6210300.253	568463.470	495.426	OIP
20004	6210272.362	568432.410	495.253	OIP
20005	6210244.047	568493.890	494.818	OIP
20596	6210003.660	568106.001	491.619	NAIL-DWB0001
20598	6209826.122	568007.155	486.236	NAIL-DWB0002
20629	6209689.965	567904.715	486.436	NAIL-DWB0003
20643	6209528.505	567763.818	488.070	NAIL-DWB0004
20906	6209294.745	567583.886	492.619	NAIL-DWB0005
20908	6210622.521	568787.130	495.633	REBAR-DWB1800
20925	6210464.091	568637.061	496.087	REBAR-DWB1953
21533	6209886.356	568085.493	486.603	REBAR-DWB4129
21487	6210126.490	568233.773	493.165	OIP
21490	6210468.217	568641.370	496.046	OIP
21491	6210423.605	568600.800	495.885	OIP
21492	6210344.114	568601.862	495.749	OIP
21493	6210009.362	568104.786	491.374	OIP
21534	6210989.153	568996.971	497.772	OIP
21535	6210982.217	569004.205	497.141	OIP

SITE C CLEAN ENERGY PROJECT - HUDSON'S HOPE BERM - RECREATION SITE BOAT LAUNCH - DRAWING INDEX

DRAWING NUMBER	DESCRIPTION
1016-C18-01305	HUDSON'S HOPE BERM - RECREATION SITE BOAT LAUNCH KEY PLAN AND DRAWING INDEX
1016-C18-01357	HUDSON'S HOPE BERM - RECREATION SITE BOAT LAUNCH AREA BOAT LAUNCH PLAN AND DETAILS



NOT FOR CONSTRUCTION



		<p style="text-align: center;">SITE C CLEAN ENERGY PROJECT</p> <p style="text-align: center;">RESERVOIR</p> <p style="text-align: center;">HUDSON'S HOPE BERM - RECREATION SITE</p> <p style="text-align: center;">BOAT LAUNCH</p> <p style="text-align: center;">KEY PLAN AND DRAWING INDEX</p>																														
<table border="1" style="width: 100%; font-size: small;"> <tr><td>DSGN</td><td></td></tr> <tr><td>INDEP CHK</td><td></td></tr> <tr><td>DFTG</td><td></td></tr> <tr><td>DFTG CHK</td><td></td></tr> <tr><td>INSP</td><td></td></tr> <tr><td>CIV</td><td></td></tr> <tr><td>STR</td><td></td></tr> <tr><td>MECH</td><td></td></tr> <tr><td>GEO</td><td></td></tr> <tr><td>ELEC</td><td></td></tr> </table>	DSGN		INDEP CHK		DFTG		DFTG CHK		INSP		CIV		STR		MECH		GEO		ELEC		<table border="1" style="width: 100%; font-size: small;"> <tr><td>DATE</td><td></td></tr> <tr><td>DIST</td><td></td></tr> <tr><td>DWG NO</td><td></td></tr> </table>	DATE		DIST		DWG NO		<table border="1" style="width: 100%; font-size: small;"> <tr><td>SIZE</td><td>A0</td></tr> <tr><td>R</td><td>A</td></tr> </table>	SIZE	A0	R	A
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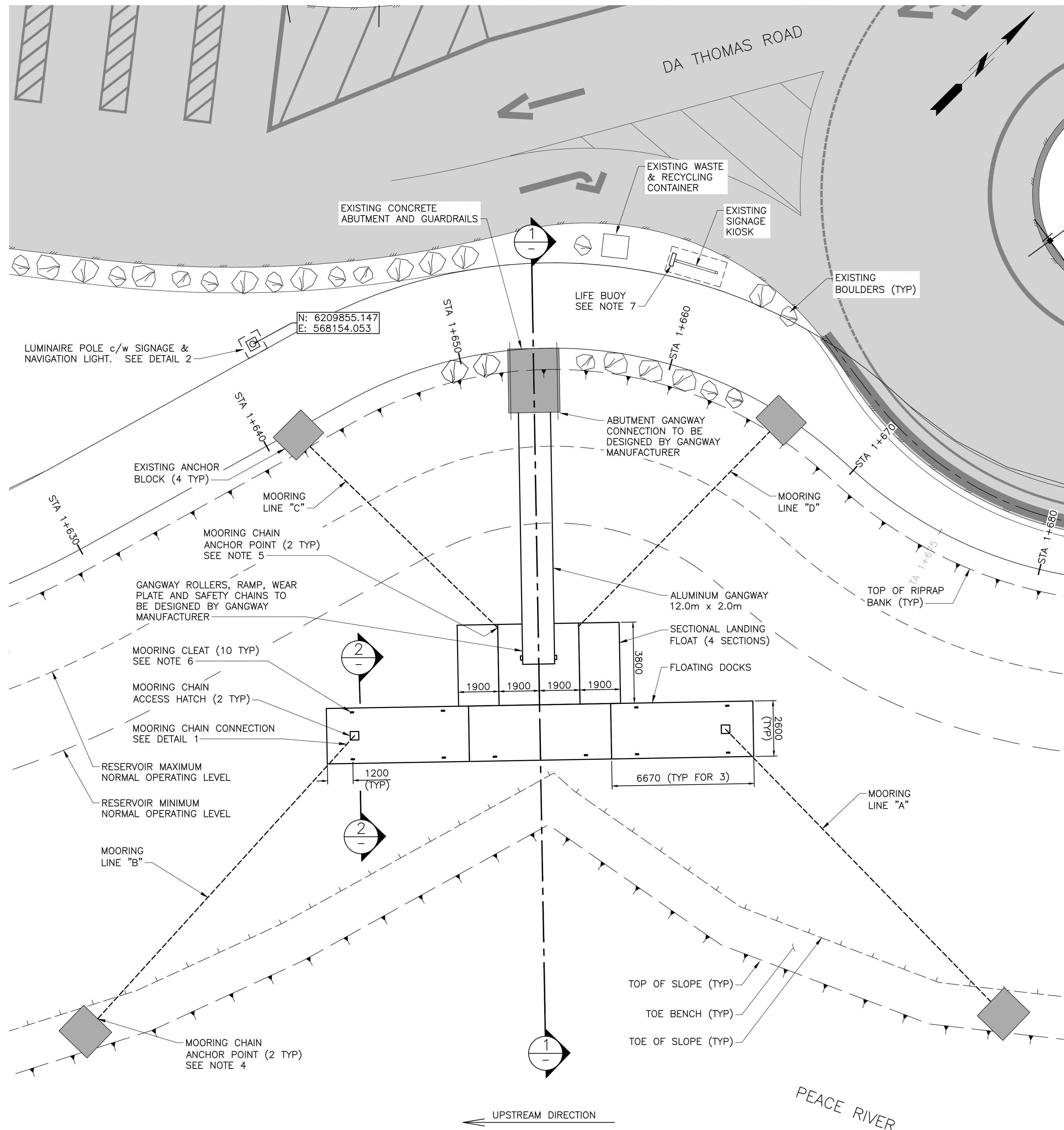


ALL DIMENSIONS ARE IN METRES UNLESS NOTED OTHERWISE

A	ISSUED FOR PROPOSAL	OCTOBER 2021	GEORGE FULTON	SB	EM
NO	REMARKS	DATE	DESIGNED	INDEP CHK	DFTG
				INSP CIV	INSP STR
				INSP MECH	INSP GEO
				INSP ELEC	REV
				ACPT	

REF#	DRAWING NUMBER	TITLE	REF#	DRAWING NUMBER	TITLE
		REFERENCE DRAWINGS			REFERENCE DRAWINGS

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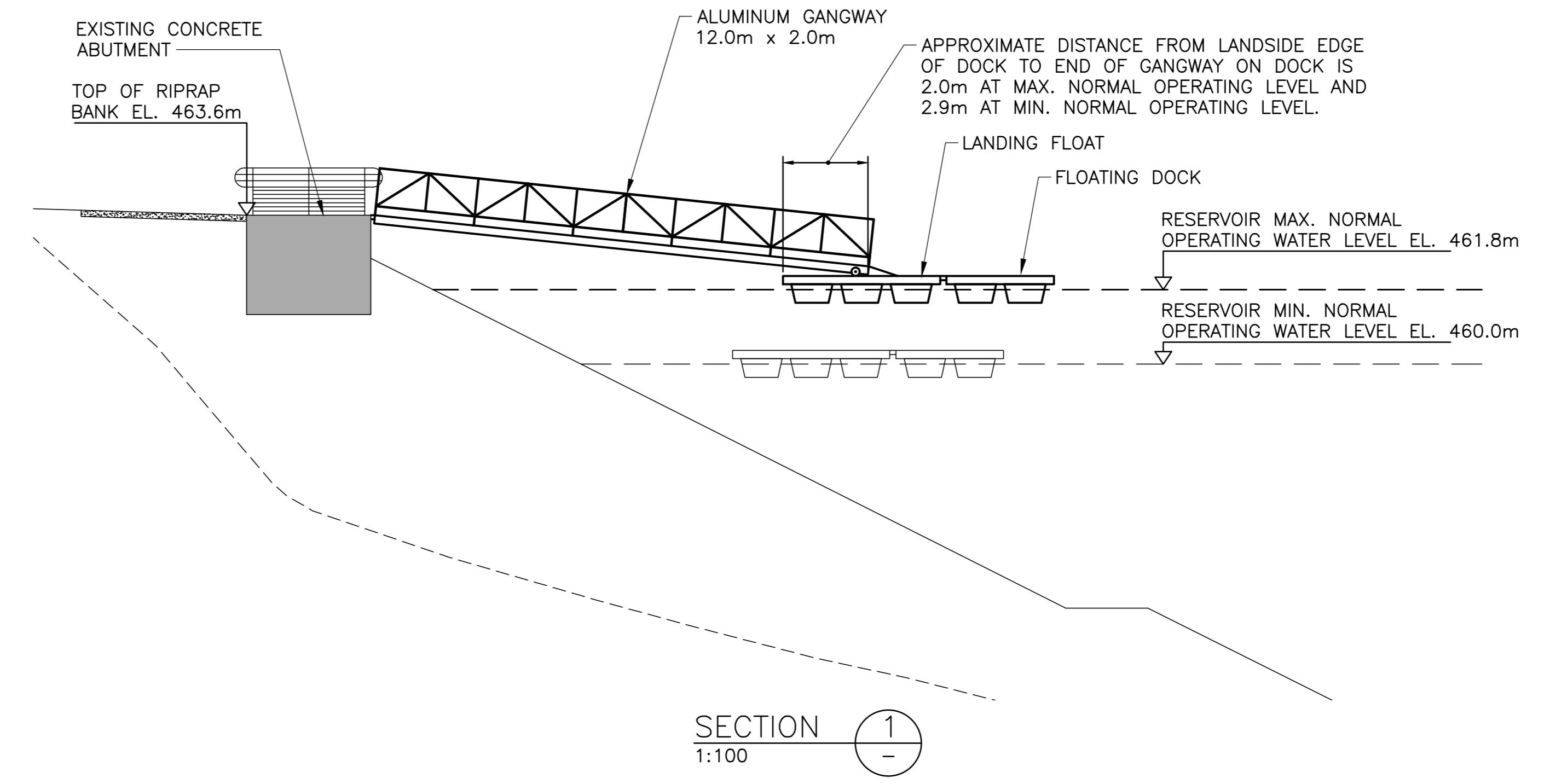


PLAN
SCALE 1:100

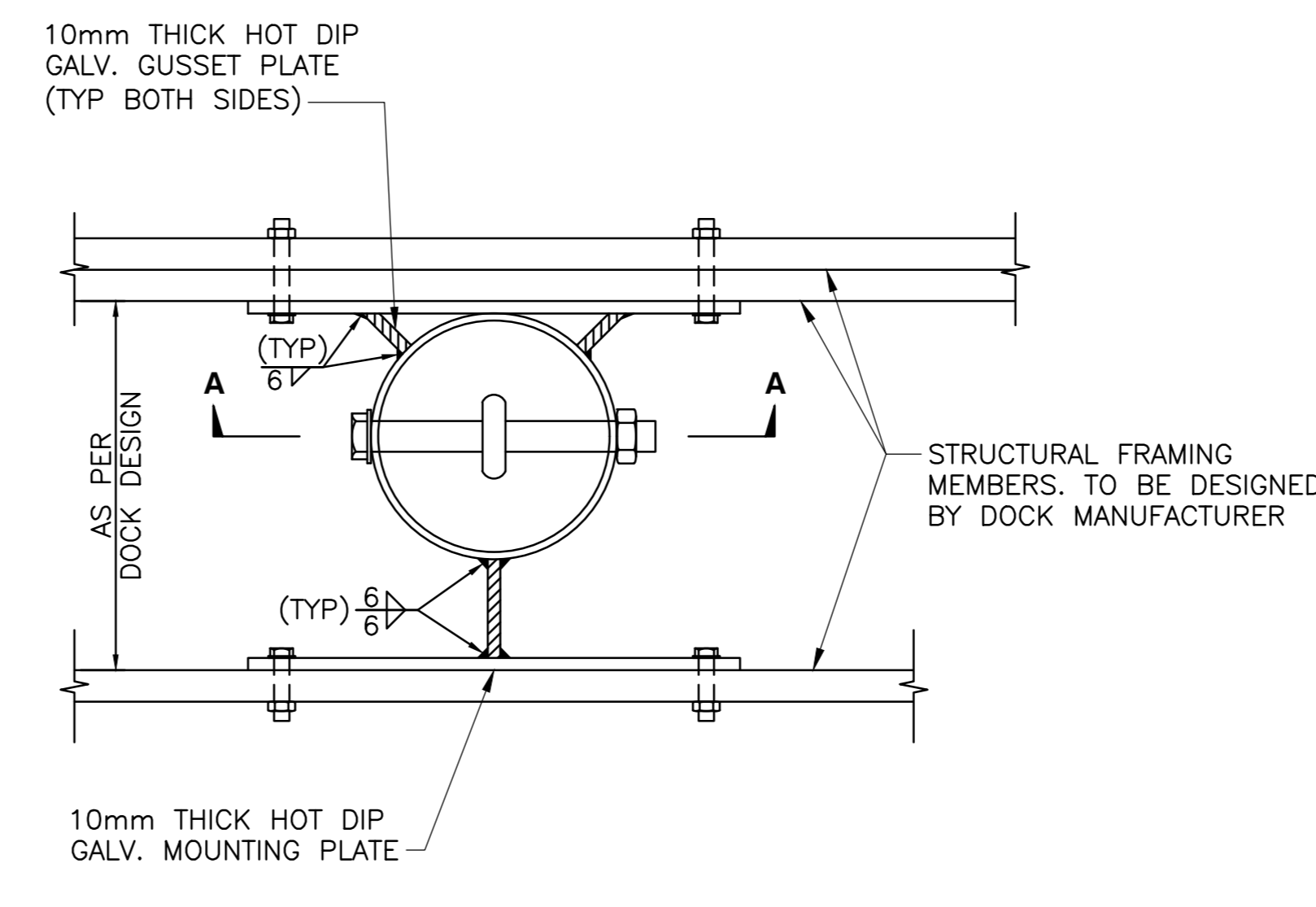
MOORING BILL OF MATERIALS				
MOORING LINE	LENGTH (m)	CHAIN TYPE	DIAMETER (mm)	HARDWARE
A	20.0	HOT DIP GALV. PROOF COIL GRADE 30	19	1 - 19mm HOT DIP GALV. BOW SHACKLE
B	20.0		19	1 - 19mm HOT DIP GALV. BOW SHACKLE
C	12.5	HOT DIP GALV. PROOF COIL GRADE 30	19	2 - 19mm HOT DIP GALV. BOW SHACKLES
D	12.5		19	2 - 19mm HOT DIP GALV. BOW SHACKLES

NOTE:
CHAIN TO HAVE WORKING LOAD LIMIT OF 42.3 kN;
SHACKLES TO HAVE EQUAL OR HIGHER WORKING LOAD LIMIT.

Reviewed/Examiné
Date: 2023-02-03
By: ERIC MORRIS
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Programme de protection des navires

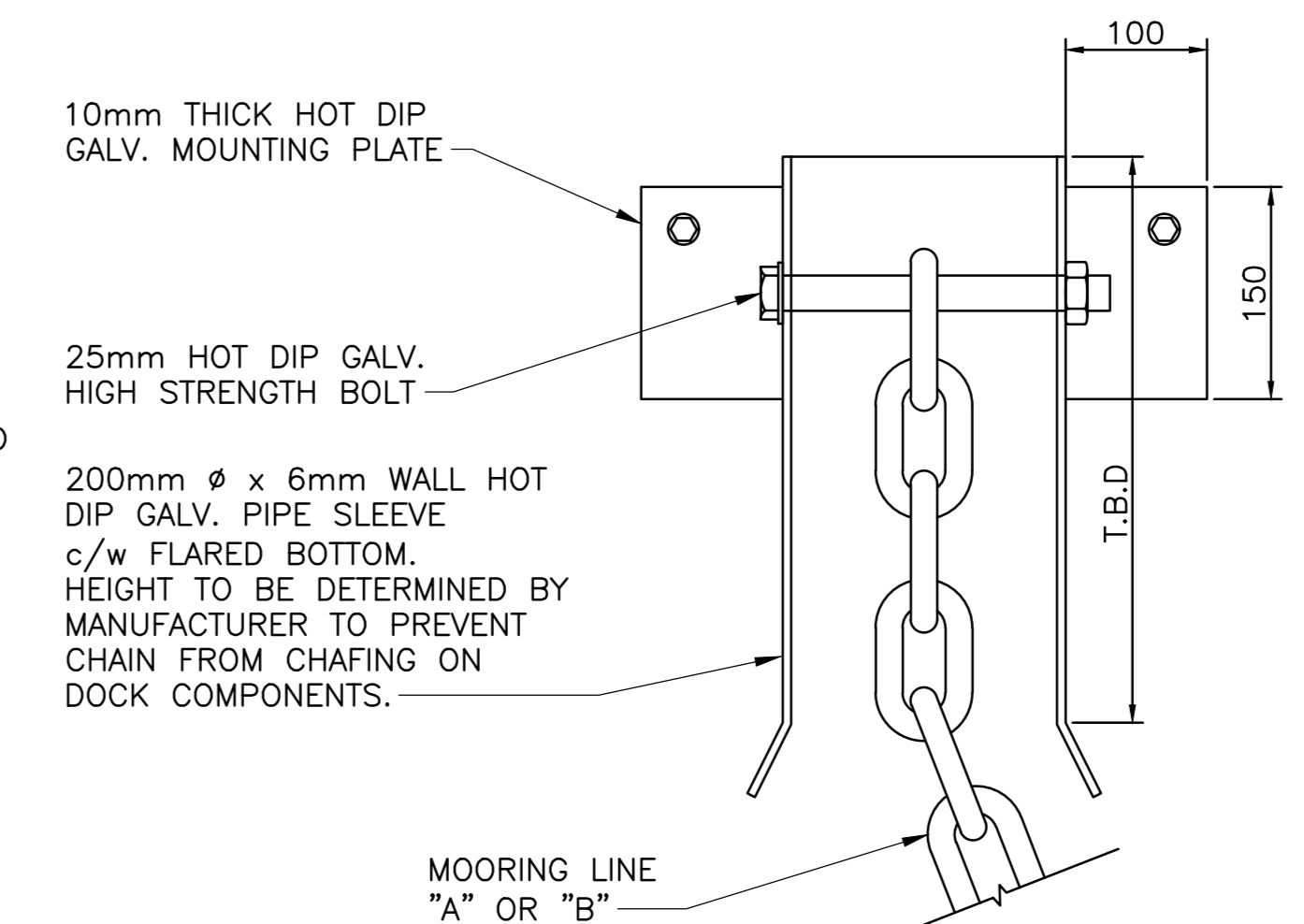


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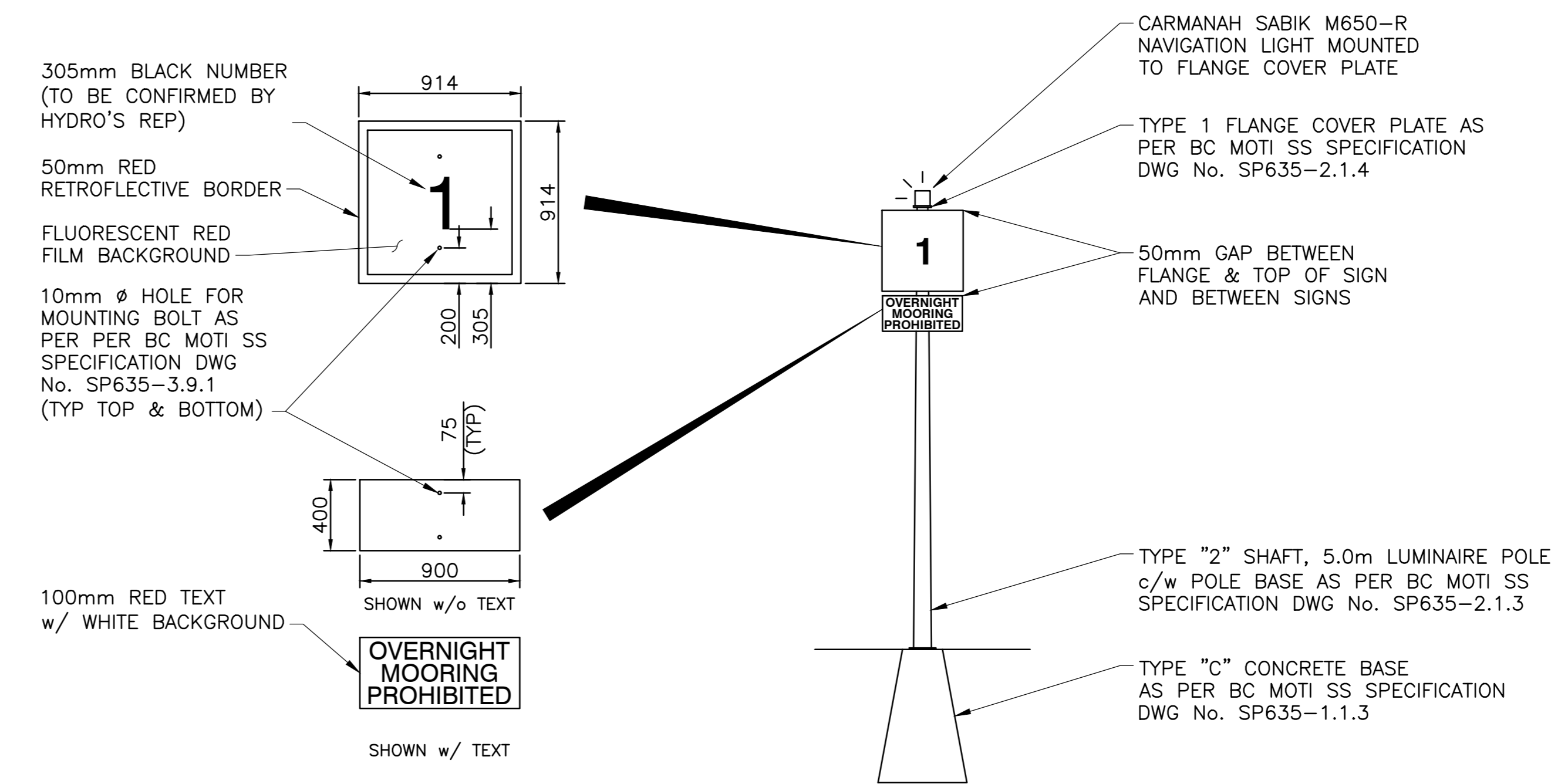


PLAN

DETAIL 1 - MOORING CHAIN CONNECTION
SCALE: 1:5



SECTION A-A



DETAIL 2 - DAYMARK
NTS

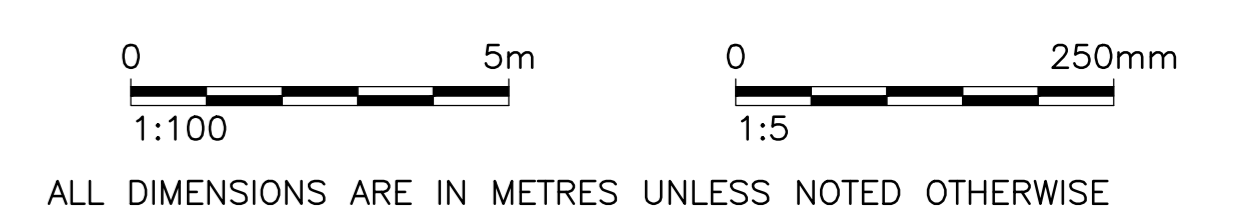


KEY PLAN
SCALE 1:10000

NOTES:

- LEGAL LINES WITH LOT INFORMATION AS PROVIDED BY B.C. HYDRO.
- COORDINATES ARE NAD 83, UTM ZONE 10.
- REMOVE FLOATING DOCKS AND GANGWAY DURING WINTER ICE PERIODS AND STORE IN A LEVEL, COVERED AREA. MOORING LINES "C" & "D" SHALL BE COMPLETELY REMOVED DURING WINTER ICE PERIODS ALONGSIDE THE FLOATING DOCKS AND GANGWAY TO PREVENT THEFT OR VANDALISM.
- MOORING LINES "A" & "B" TO BE CONNECTED TO SUBMERGED ANCHOR BLOCKS WITH A BOW SHACKLE. SEIZE SHACKLE PINS WITH STAINLESS STEEL WIRE.
- MOORING LINES "C" & "D" TO BE CONNECTED TO DOCK STRUCTURAL FRAMING CONNECTION DETAILS TO BE PROVIDED BY DOCK MANUFACTURER.
- TEN (10) 200 mm FLIP UP CLEATS, "DOCK EDGE" POLISHED ALMAG 35 ALUMINUM. CLEATS TO BE INSTALLED TO FLIP AWAY FROM EDGE OF DOCK.
- MOUNT LIFE BUOY AND HEAVING LINE TO EXISTING SIGNAGE KIOSK. INSTALL HOOK 1000mm ABOVE GRADE TO OUTSIDE EDGE OF WOOD POST.

NOT FOR CONSTRUCTION

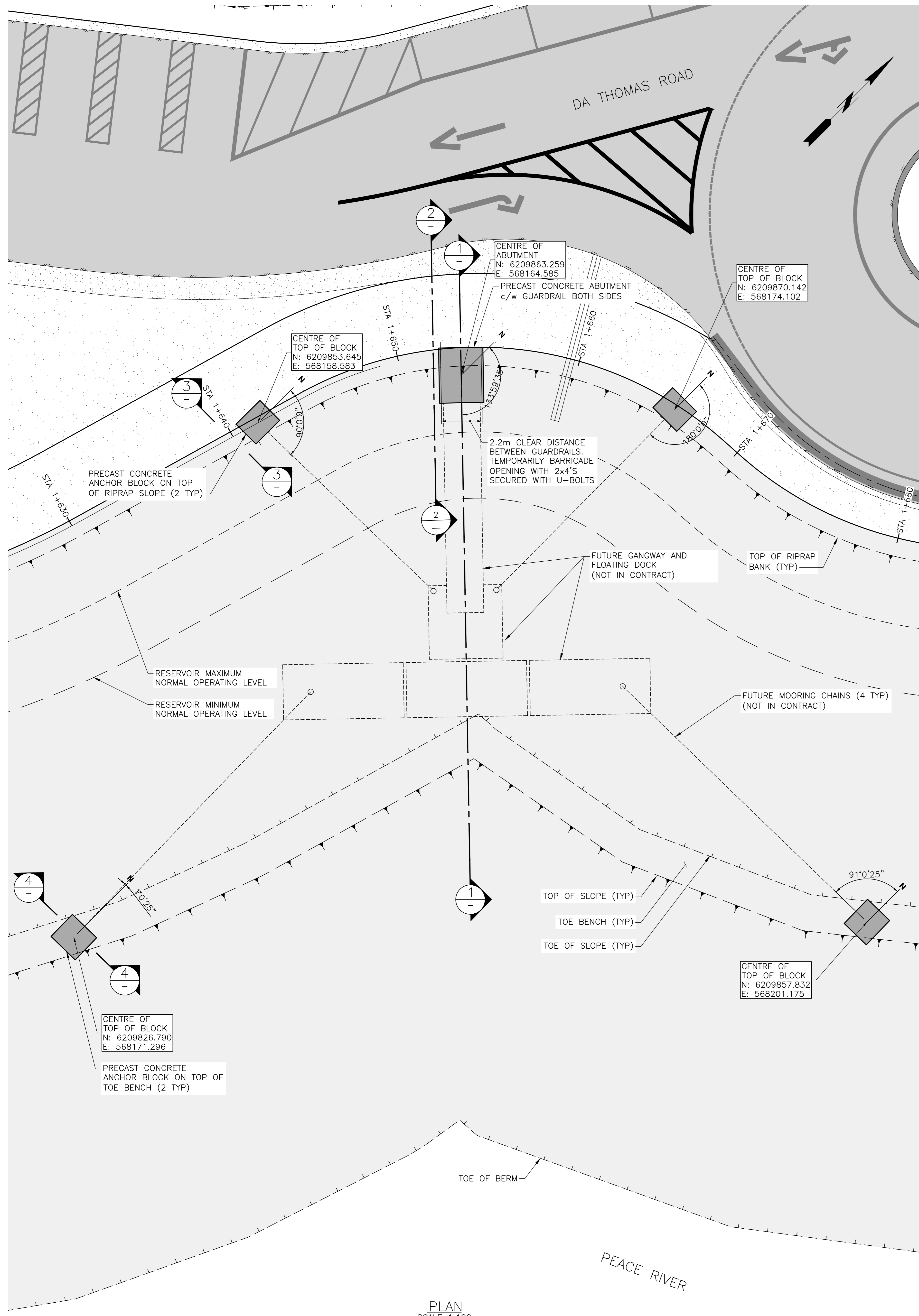


KERR WOOD LEIDL
consulting engineers

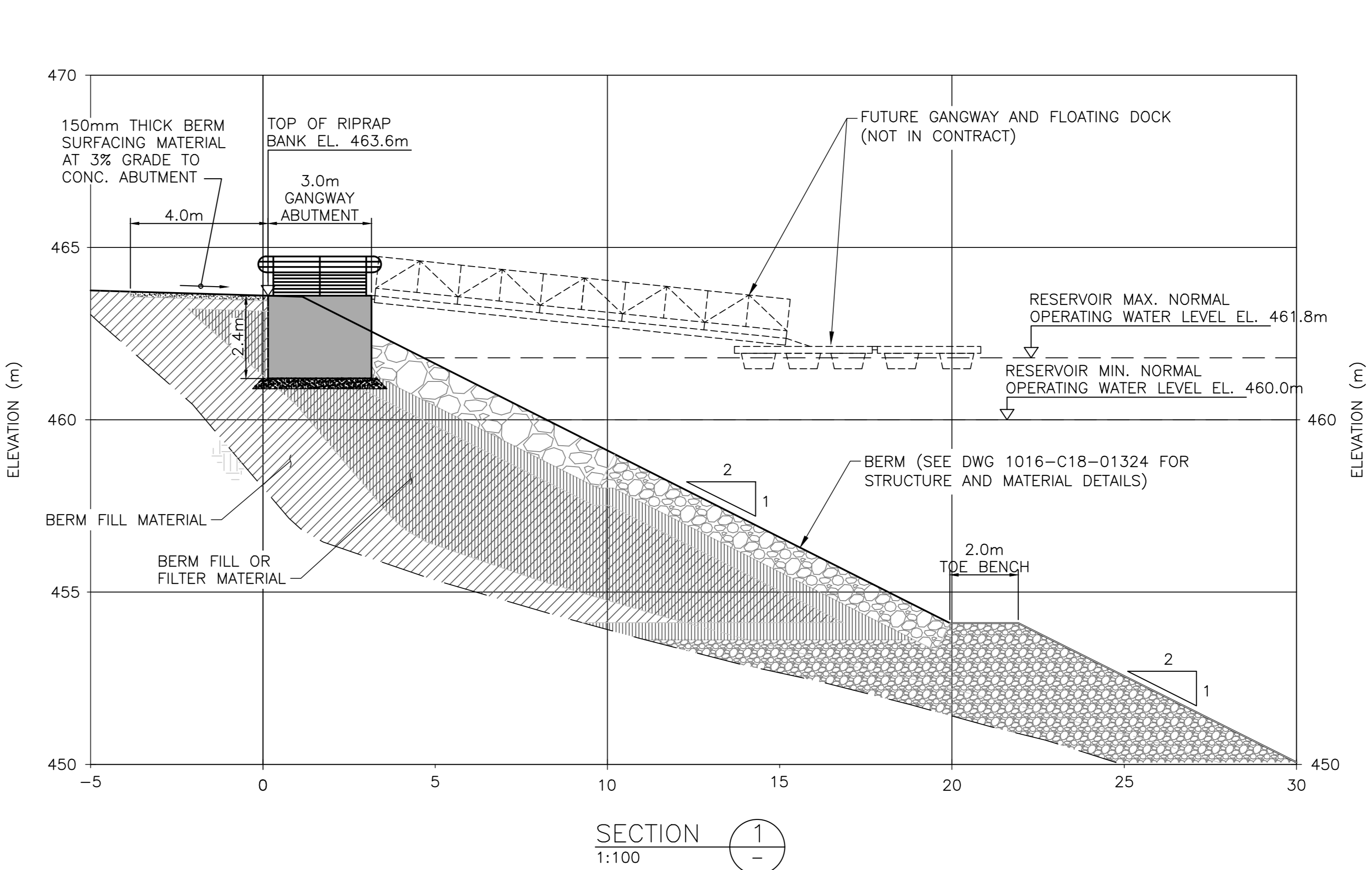
SITE C CLEAN ENERGY PROJECT		BC Hydro	
DSGN		SITE C CLEAN ENERGY PROJECT	
INDEP CHK		RESERVOIR HUDSON'S HOPE BERM - RECREATION SITE	
DFTG		BOAT LAUNCH AREA	
DFTG CHK		BOAT LAUNCH	
INSP		PLAN AND DETAILS	
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NO	ISSUED FOR PROPOSAL	DATE	DESIGNED	MRM	INDEP CHK	DFTG	INSP CIV	INSP STR	INSP MECH	INSP GEO	INSP ELEC	REV	ACPT
1	ISSUED FOR PROPOSAL	OCT. 2021	ERIC MORRIS	MRM									

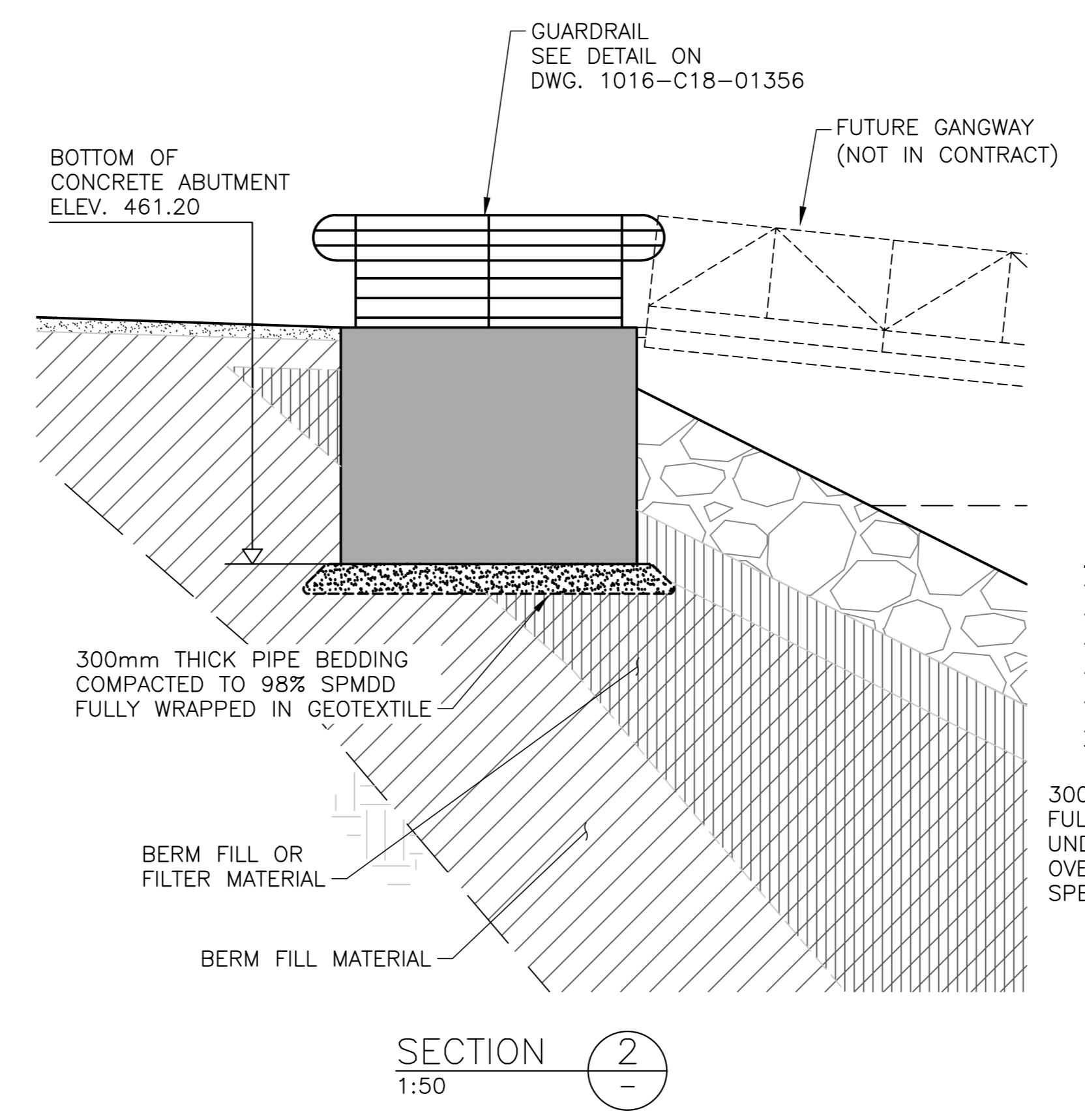
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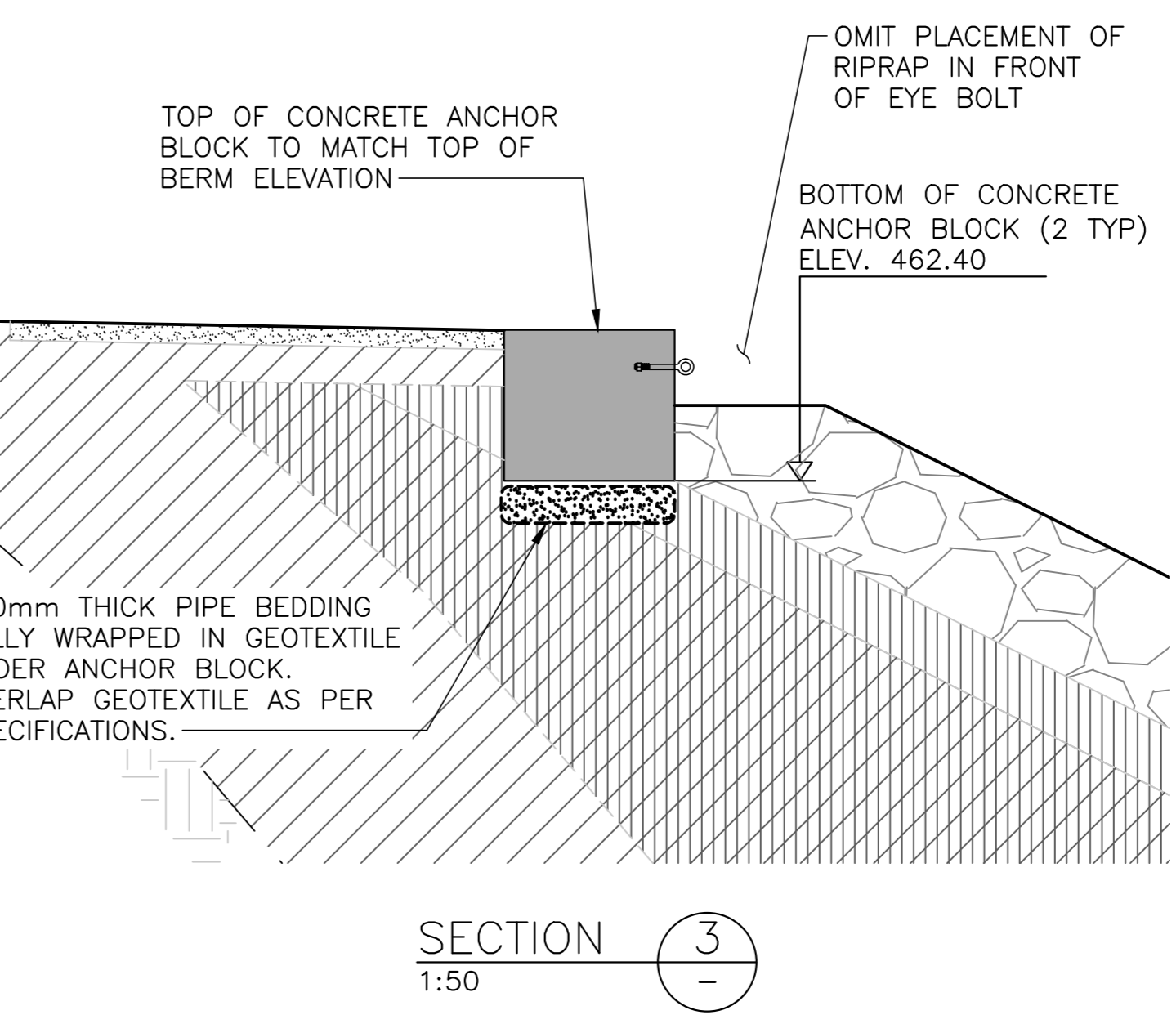
PLAN
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SECTION 1
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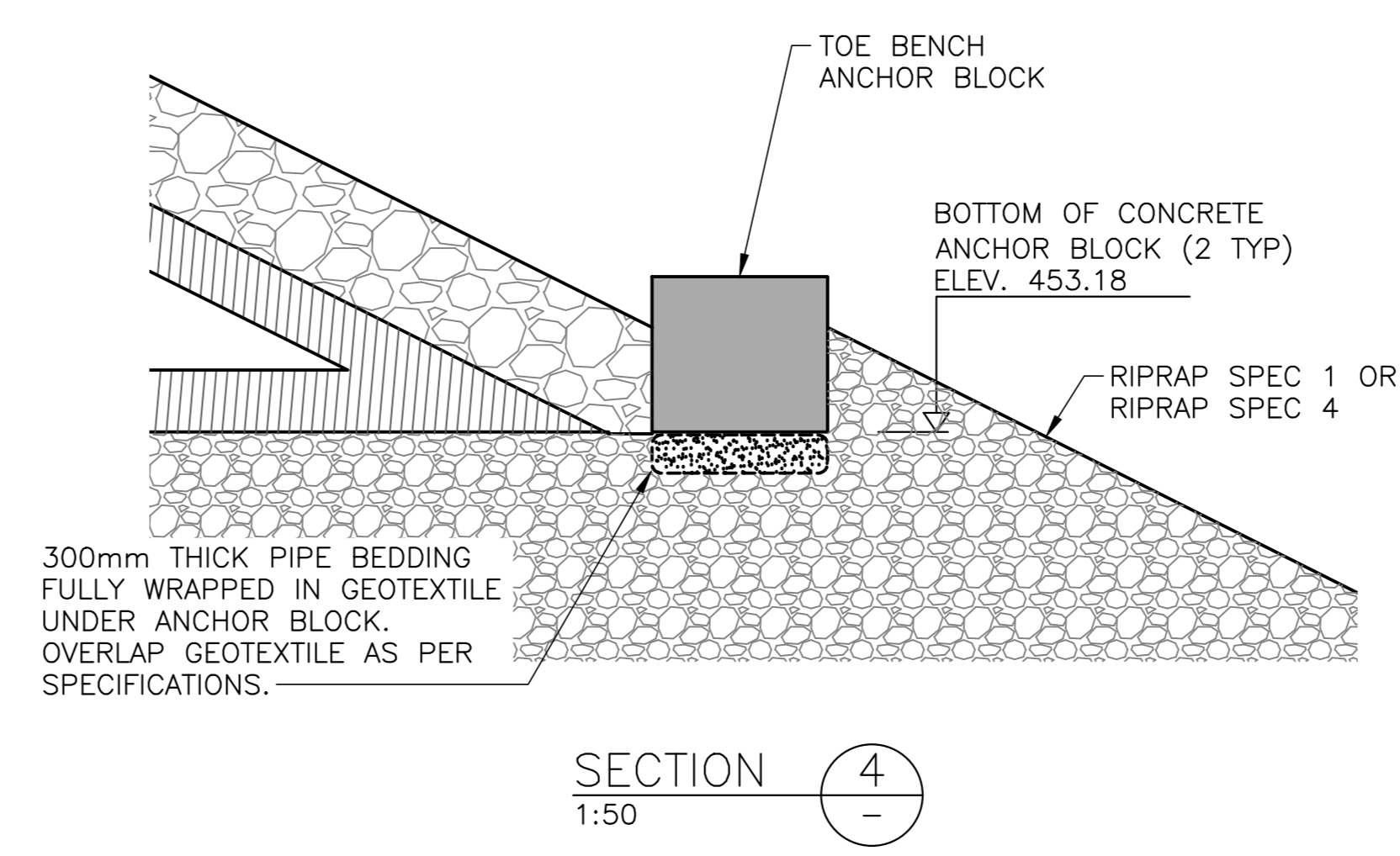


SECTION 2
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SECTION 3
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Reviewed/Examined
Date: 2023-02-03
By: ERIC MORRIS
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Nanaiya Protection Program
Programme de protection des navigants



SECTION 4
1:50



KEY PLAN
SCALE 1:10000

- NOTES :
- LEGAL LINES WITH LOT INFORMATION AS PROVIDED BY B.C. HYDRO.
 - CONTOURS SHOWN ON PLAN ARE COMPILED FROM THREE SOURCES AND IDENTIFIED SEPARATELY ON CROSS SECTIONS:
 - GROUND SURVEY (2017) PROVIDED BY DWB CONSULTING SERVICES LTD.
 - RAW LIDAR GROUND DATA (2015) PROVIDED BY B.C. HYDRO.
 - BATHYMETRY DATA (2011) AS PROVIDED BY B.C. HYDRO.
 - ORDINATES ARE NAD 83, UTM ZONE 10.

ISSUED FOR CONSTRUCTION



ALL DIMENSIONS ARE IN METRES UNLESS NOTED OTHERWISE

KW KERR WOOD LEIDAL
consulting engineers

DSGN INDEP CHK DFTG DFTG CHK INSP CIV STR MECH GEO ELEC		SITE C CLEAN ENERGY PROJECT RESERVOIR HUDSON'S HOPE BERM - RECREATION SITE BOAT LAUNCH AREA GENERAL ARRANGEMENT PLAN AND SECTIONS	
DATE	DIST	DWG NO	1020-C18-01355
REV	ACPT	DATE	DIST
NO	REMARKS	DATE	DESIGNED
0	ISSUED FOR CONSTRUCTION	SEPT 2020	ERIC MORRIS
NO	REMARKS	DATE	DESIGNED
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